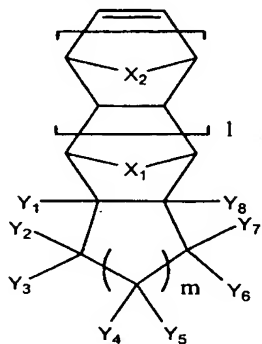


In the Claims:

Please amend claims 1, 3 and 8 as follows:

Claim 1 (currently amended) A photoresist monomer represented by following Formula 1:

Formula 1



wherein,  $l$  and  $m$  are individually integers ranging from 0 to 3;

$X_1$  and  $X_2$  are individually selected from the group consisting of ( $C_1$ - $C_{10}$ ) alkylene, O and S when  $l$  ranges from 1 to 3;

$X_1$  and  $X_2$  are individually selected from the group consisting of ( $C_2$ - $C_{10}$ ) alkylene, O and S when  $l$  is 0; and

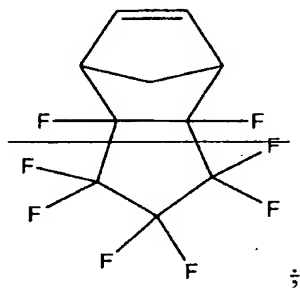
$Y_1, Y_2, Y_3, Y_4, Y_5, Y_6, Y_7$  and  $Y_8$  are individually selected from the group consisting of halogen, an alkyl partially substituted with halogen, and an alkyl completely substituted with halogen; ~~and~~

~~$l$  and  $m$  are individually integers ranging from 0 to 3.~~

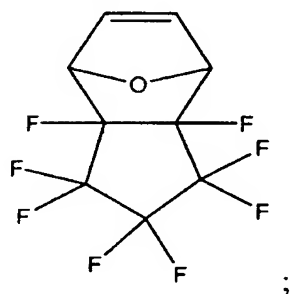
Claim 2 (original) The photoresist monomer according to claim 1, wherein the  $Y_1, Y_2, Y_3, Y_4, Y_5, Y_6, Y_7$  and  $Y_8$  are individually selected from the group consisting of F, Cl, Br, I and  $CF_3$ .

Claim 3 (currently amended) The photoresist monomer according to claim 1, wherein the monomer of Formula 1 is selected from the group consisting of compounds of the Formulas 1a 1b to 1d :

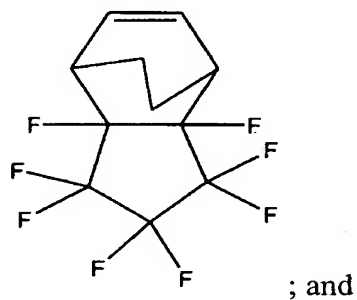
Formula 1a



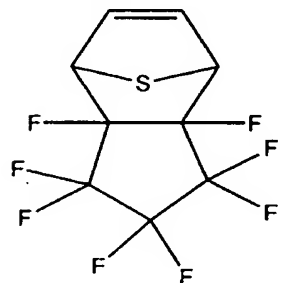
Formula 1b



Formula 1c

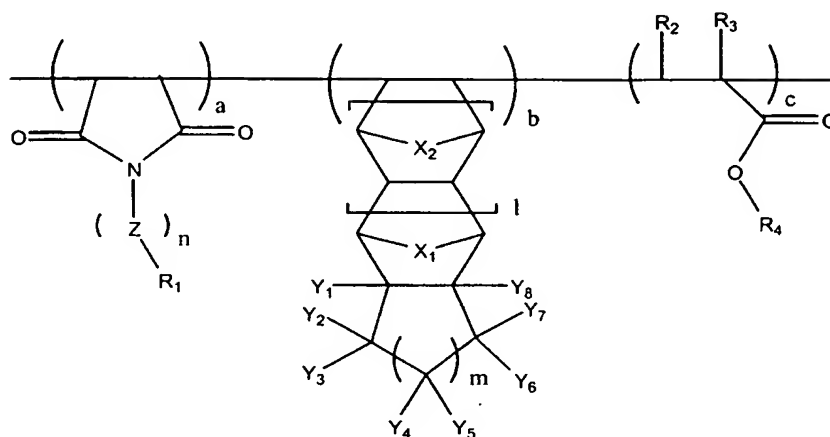


Formula 1d



Claim 4 (original) A photoresist polymer comprising a repeating unit of the following Formula 4:

Formula 4



wherein,  $R_1$ ,  $R_2$  and  $R_3$  are individually selected from the group consisting of H, halogen,  $(C_1-C_{20})$  alkyl,  $(C_1-C_{20})$  alkyl with halogen substituent(s),  $(C_1-C_{20})$  alkyl containing an ether group (-O-), and  $(C_1-C_{20})$  alkyl with halogen substituent(s) and containing an ether group;

$R_4$  is an acid labile protecting group;

$X_1$  and  $X_2$  are individually selected from the group consisting of  $(C_1-C_{10})$ alkylene, O and S;

$Y_1$ ,  $Y_2$ ,  $Y_3$ ,  $Y_4$ ,  $Y_5$ ,  $Y_6$ ,  $Y_7$  and  $Y_8$  are individually selected from the group consisting of halogen, an alkyl partially substituted with halogen, and an alkyl completely substituted with a halogen;

Z is O or S;

$l$  and  $m$  are individually integers ranging from 0 to 3;

$n$  is 0 or 1; and

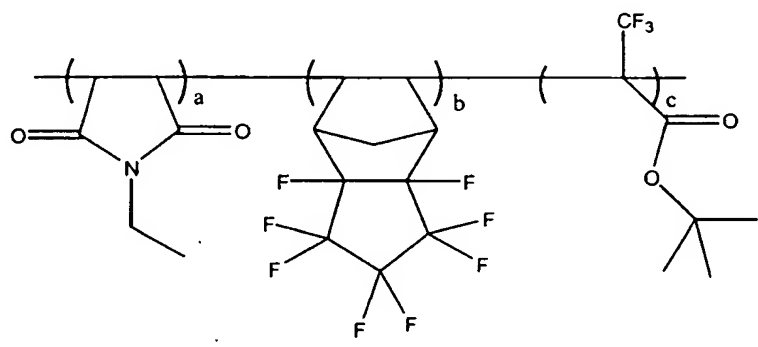
the ratio  $a : b : c$  falls within the ranges 0-60mol% : 5-80mol% : 0-90mol%.

Claim 5 (original) The photoresist polymer according to claim 4, wherein the  $R_1$ ,  $R_2$  and  $R_3$  are individually selected from the group consisting of H, F,  $(C_1-C_{20})$  alkyl,  $(C_1-C_{20})$  perfluoroalkyl,  $(C_1-C_{20})$  alkyl containing an ether group,  $(C_1-C_{20})$  perfluoroalkyl containing an ether group,  $(C_1-C_{20})$  alkyl partially substituted with F, and  $(C_1-C_{20})$  alkyl partially substituted with F and containing an ether group.

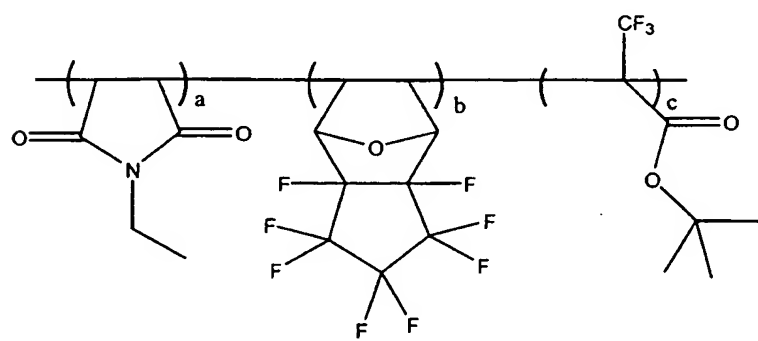
Claim 6 (original) The photoresist polymer according to claim 4, wherein the acid labile protecting group is selected from the group consisting of tert-butyl, tetrahydropyran-2-yl, 2-methyl tetrahydropyran-2-yl, tetrahydrofuran-2-yl, 2-methyl tetrahydrofuran-2-yl, 1-methoxypropyl, 1-methoxy-1-methylethyl, 1-ethoxypropyl, 1-ethoxy-1-methylethyl, 1-methoxyethyl, 1-ethoxyethyl, tert-butoxyethyl, 1-isobutoxyethyl and 2-acetylmenth-1-yl.

Claim 7 (original) The photoresist polymer according to claim 4, wherein the repeating unit of the Formula 4 is selected from the group consisting of Formulas 4a to 4d:

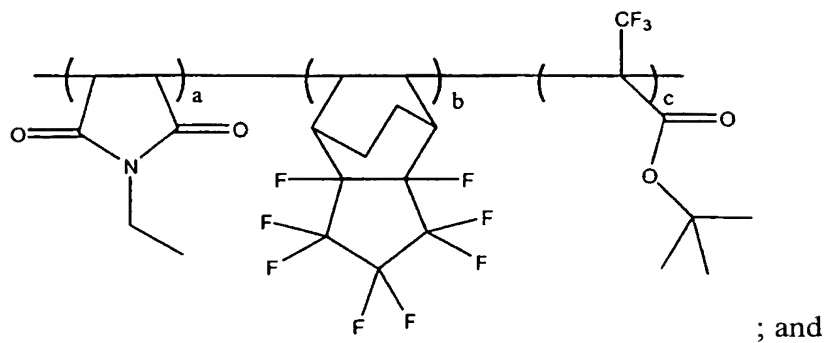
Formula 4a



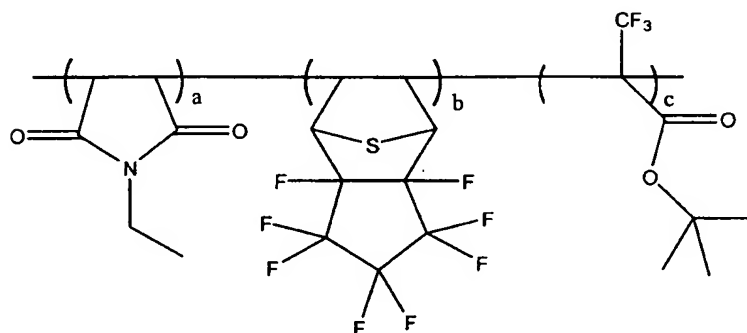
Formula 4b



Formula 4c



Formula 4d

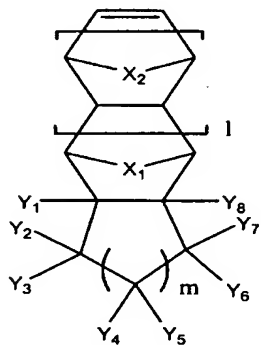


Claim 8 (currently amended) A process of preparing a photoresist polymer comprising:

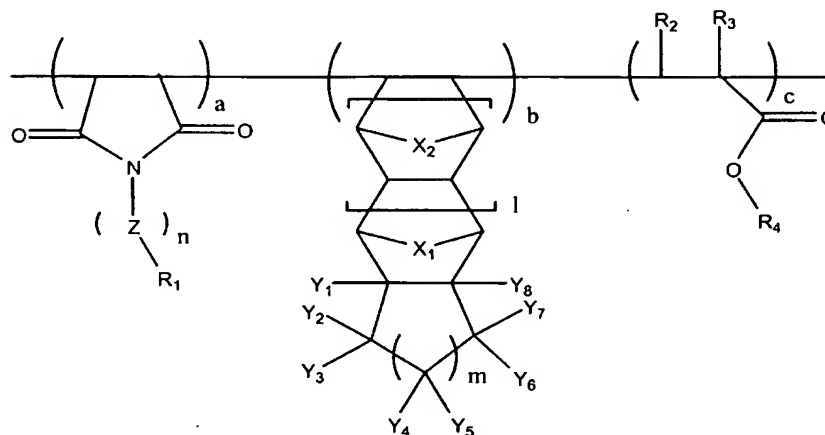
(a) admixing (i) a compound of Formula 1 7, and optionally (ii) at least one of the compound of Formula 5 and the compound of Formula 6; and

(b) adding a polymerization initiator into the resultant of step (a) to obtain a repeating unit of Formula 4:

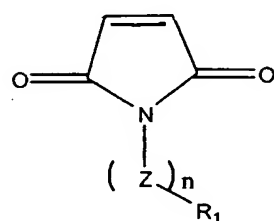
Formula 1 7



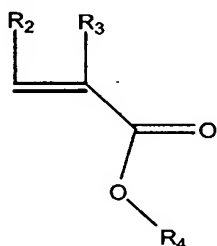
Formula 4



Formula 5



Formula 6



wherein,  $R_1$ ,  $R_2$  and  $R_3$  are individually selected from the group consisting of H, halogen,  $(C_1-C_{20})$  alkyl,  $(C_1-C_{20})$  alkyl with halogen substituent(s),  $(C_1-C_{20})$  alkyl containing an ether group, and  $(C_1-C_{20})$  alkyl with halogen substituent(s) and containing an ether group;

$R_4$  is an acid labile protecting group;

$X_1$  and  $X_2$  are individually selected from the group consisting of  $(C_1-C_{10})$  alkylene, O and S;

$Y_1$ ,  $Y_2$ ,  $Y_3$ ,  $Y_4$ ,  $Y_5$ ,  $Y_6$ ,  $Y_7$  and  $Y_8$  are individually selected from the group consisting of halogen, an alkyl partially substituted with halogen and an alkyl completely substituted with a halogen;

Z is O or S;

$l$  and  $m$  are individually integers ranging from 0 to 3;

n is 0 or 1; and  
the ratio a : b : c falls within the ranges 0-60mol% : 5-80mol% : 0-90mol%.

Claim 9 (original) The process according to claim 8, wherein the step (a) is carried out in a polymerization solvent selected from the group consisting of cyclohexanone, cyclopentanone, tetrahydrofuran, dimethylformamide, dimethylsulfoxide, dioxane, methylethylketone, benzene, toluene, xylene and mixtures thereof.

Claim 10 (original) The process according to claim 8, wherein the polymerization initiator is selected from the group consisting of 2,2'-azobisisobutyronitrile(AIBN), benzoylperoxide, acetylperoxide, laurylperoxide, tert-butylperoxide and di-tert-butyl peroxide.

Claim 11 (original) A photoresist composition comprising:

- (i) the photoresist polymer of claim 4;
- (ii) an organic solvent; and
- (iii) a photoacid generator.

Claim 12 (original) The photoresist composition according to claim 11, wherein the photoacid generator is selected from the group consisting of phthalimidotrifluoromethane sulfonate, dinitrobenzyltosylate, n-decyl disulfone and naphthylimido trifluoromethane sulfonate.

Claim 13 (original) The photoresist composition according to claim 12, wherein the photoacid generator further comprises a compound selected from the group consisting of diphenyl iodide hexafluorophosphate, diphenyl iodide hexafluoroarsenate, diphenyl iodide hexafluoroantimonate, diphenyl p-methoxyphenylsulfonium triflate, diphenyl p-toluenylsulfonium triflate, diphenyl p-isobutylphenylsulfonium triflate, diphenyl p-tert-butylphenylsulfonium triflate, triphenylsulfonium hexafluorophosphate, triphenylsulfonium hexafluoroarsenate, triphenylsulfonium

hexafluoroantimonate, triphenylsulfonium triflate, dibutyl-naphthylsulfonium triflate and mixtures thereof.

Claim 14 (original) The photoresist composition according to claim 11, wherein the photoacid generator is present in an amount ranging from about 0.05 to about 10% by weight of the photoresist polymer.

Claim 15 (original) The photoresist composition according to claim 11, wherein the organic solvent is selected from the group consisting of methyl 3-methoxypropionate, ethyl 3-ethoxypropionate, propylene glycol methyl ether acetate, cyclohexanone, 2-heptanone, ethyl lactate and mixtures thereof.

Claim 16 (original) The photoresist composition according to claim 11, wherein the organic solvent is present in an amount ranging from about 500 to about 2000% by weight of the photoresist polymer.

Claim 17 (original) A process for forming a photoresist pattern, comprising:

- (a) coating a photoresist composition of claim 11 on a substrate to form a photoresist film;
- (b) exposing the photoresist film to light; and
- (c) developing the exposed photoresist film to obtain a photoresist pattern.

Claim 18 (original) The process according to claim 17, further comprising a soft baking step before step (b) and/or a post baking step after step (b).

Claim 19 (original) The process according to claim 18, wherein the soft and post baking steps are individually performed at a temperature ranging from about 70 to about 200°C.



Claim 20 (original) The process according to claim 17, wherein the sources of the light is selected from the group consisting of VUV, ArF, KrF, E-beam, EUV and ion beam.

Claim 21 (original) The process according to claim 17, wherein the irradiation energy of the step (b) is in the range of from about  $1\text{mJ/cm}^2$  to about  $100\text{mJ/cm}^2$ .

Claim 22 (original) The process according to claim 17, wherein the step (c) is performed in alkaline developing solution.

Claim 23 (original) A semiconductor element manufactured according to the process of claim 17.